Joints

Functional Classification

- Synarthoroses → Immovable
- Amphiarthroses → Slghtly movable
- Diarthroses → Frely movable, most common

Structural Classification

- **Fibrous**: no cavity, bones held togetherr by thin layer of fibrous tissue or dense fibrous CT
  - Sutures → Btwn bones of skull, synarthroses, midsaggital suture, lamboidal suture
  - Syndesmoses → Bones united w dense fibrous tissue, ampiarthrosis, interosseous ligament btwn ulna and radius, tibia and fibula
  - Gomphoses → Teeth sockets, periodontal ligament to hold tooth root to bone, synarthroses
- **Cartilagenous**: no cavity, bones united by cartilage
  - Synchondroses → Hyaline cartilage, epiphyseal plates, costal cartilage, true ribs to sternum, synarthroses
  - Symphyses → Fibrocartilage, pubic symphysis, Intervertebral disk, amphiarthroses (ladies)
- **Synovial**: Most common, diarthroses
  - Gliding → Interphangeal joints
  - Hinge → Elbow joint
  - Pivot → Proximal radial ulnar, atlantoaxial
  - Ellipsoid → Radiocarpal
  - Saddle → Carpal-metacarpal joint of thumb
  - Ball and socket → Shoulder and Hip

5 common characteristics:
1. Synovial Cavity
2. Articular Cartilage (covering ends of bones)
3. Articular capsule (dense reg or irreg CT)
4. Synovial membrane (lining cavity)
5. Synovial Fluid (hyaluronic acid, lubricin, nutrient supply)

Articular Cartilage

Specialized form of Hyaline Cartilage

Promotes smooth movement btwn bones

Surface cartilage

Lacks perichondrium
naked cartilage in contact w each other
Promotes sliding btwn bones
teflon function
Large Collagen type II
Arched collagen fibers run radially to surfacce, add strength, resist stress and shearing

Calcified Cartilage

Away from articular surface to give more support and strength

Subchondral bone

layer of support for overlying articular cartilage bc AC is relatively avascular, nutrients derived from synovial fluid and subchondral bone by diffusion through ECM